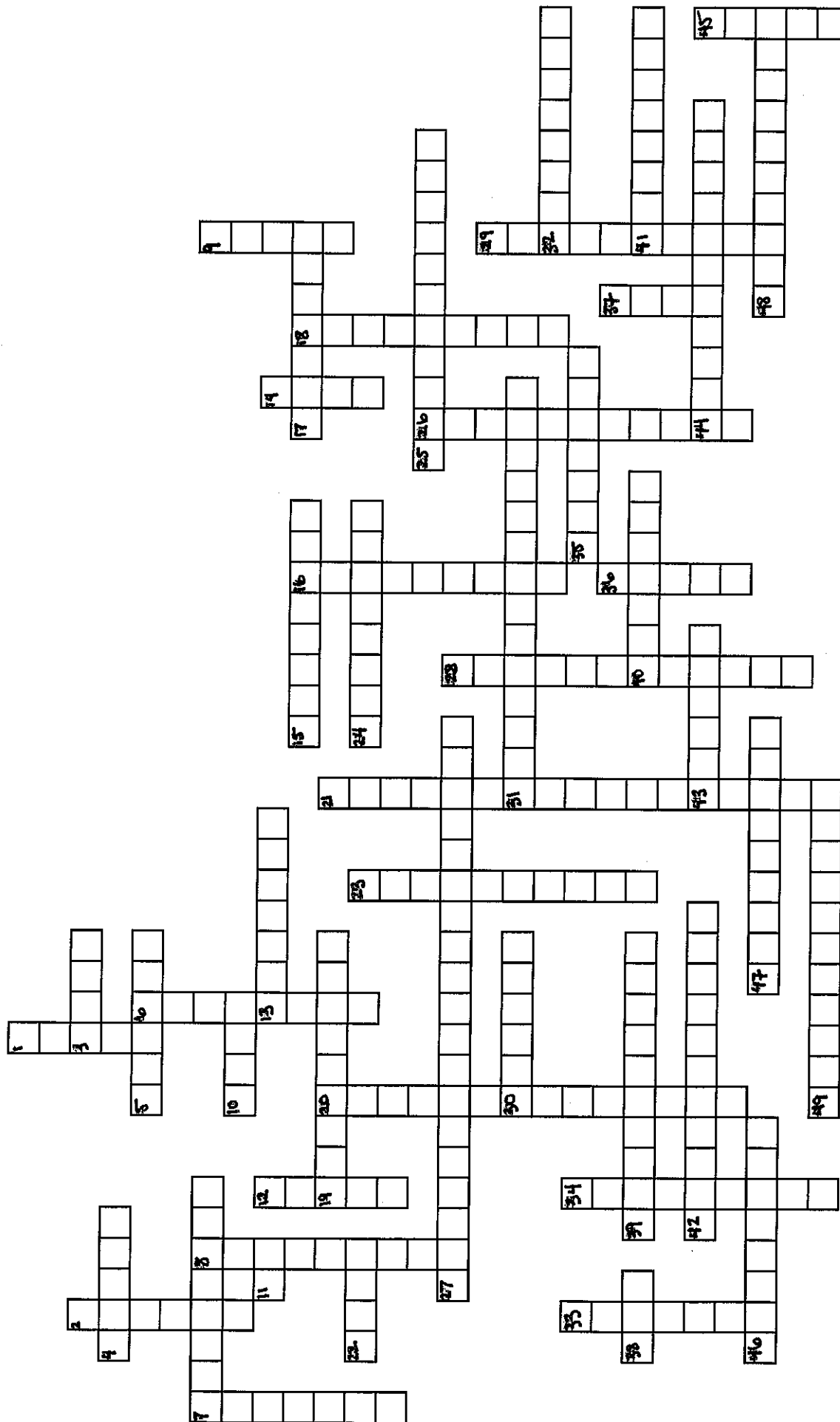


# ALGEBRA 2B VOCABULARY – FINAL EXAM REVIEW



## ACROSS

3. Down: The  $c$  in  $ax^2 + bx + c$  and the  $k$  in  $a(x - h)^2 + k$  shift the graph up and \_\_\_\_\_.
4. One method for finding the solutions of a function is to \_\_\_\_\_ it and find the x-intercepts.
5. The minimum x-value that is needed for a periodic function repeats itself. (How long the function takes before it repeats its cycle).
7. If I want to write  $\log_{12} x$  as two separate logarithms, I need to \_\_\_\_\_ the logarithms. It's also what I do with the exponents to simplify  $\frac{x^9}{x^3}$ .
10. The trigonometric function that is Opposite/Hypotenuse. It is also the height of triangles as you move around the unit circle.
11. If the  $a$  value in  $ax^2 + bx + c$  is positive, then the parabola is concave \_\_\_\_\_.
13. An angle can be measured in \_\_\_\_\_ or degrees.
15. The x-values of a function that makes  $y=0$ . Also known as a root or zero.
17. If you want to convert to this from radians, use the conversion factor that  $\pi$  radians = 180 \_\_\_\_\_.
19. The reciprocal of tangent.
22. In  $y = (x + 7)^2$ , the  $h$  value shifts the graph to the \_\_\_\_\_.
24. The reciprocal of sine.
25. If my  $b$  value in an exponential model is 0.75, then I know that my money \_\_\_\_\_ at a rate of 25%.
27. The property we use to get from factors to solutions. It says if  $ab=0$ , then either  $a=0$  or  $b=0$ .

30. The reciprocal of cosine.
31. The general name for changing the graph of a parent function. (I.e. shifting it, stretching it, reflecting it, etc.)
32. The shape of the graph of a quadratic function.
35. The trigonometric function that is Opposite/Adjacent.
38. If I want to write  $\log_6 x$  as two separate logarithms, I need to \_\_\_\_\_ the logarithms. It's also what I do with the exponents to simplify  $x^2 x^7$ .
39. What a solution looks like on a graph.
40. When the  $a$  value of a parabola is negative, the vertex is a \_\_\_\_\_.
41.  $ax^2 + bx + c$  is called \_\_\_\_\_ form.
42. A function in the form  $y = \log_b x$ .
43. The trigonometric function that is Adjacent/Hypotenuse. It is also the length of the base of triangles as you move around the unit circle.
44. If my  $b$  value in an exponential model is 1.25, then I know that my money \_\_\_\_\_ at a rate of 25%.
46. We need  $i$  because it allows us to take the square root of a \_\_\_\_\_.
47. The process of taking a polynomial and breaking it down into factors that are multiplied together. For example, turning  $x^2 + 5x + 6$  into  $(x + 2)(x + 3)$ .
48. The y-value whenever  $x=0$
49. The theorem that is  $a^2 + b^2 = c^2$  and can be used to find the missing leg length of a right triangle.

## DOWN

1. When the absolute value of  $a$  for a quadratic is less than 1, the parabola is \_\_\_\_\_. For example, in the function  $y = -\frac{1}{3}x^2 + 7$
2. When the  $b$  value in  $y = ab^x$  is greater than 1, then the function is exponential \_\_\_\_\_.
6. Exponential and logarithmic functions are \_\_\_\_\_ of each other.
7. Something in the form  $a^2 - b^2$ , for example  $x^2 - 9$ , is called a difference of \_\_\_\_\_.
8. The height of a sine wave from its midline to its maximum or minimum value.
9. The horizontal translation of a trigonometric function is called \_\_\_\_\_ shift.
12. When the  $b$  value in  $y = ab^x$  is between 0 and 1, then the function is exponential \_\_\_\_\_.
14. Another name for the solution of a function. It gets its name because in order to find solutions, the  $y$ -value must be equal to \_\_\_\_\_.
16. With complex numbers,  $i$  is short for \_\_\_\_\_.
18. The transformation when the  $a$  value is negative. We can say the parabola is concave down, or \_\_\_\_\_.
20. The vertical line that cuts the parabola into two symmetric halves. In standard form, found by the formula  $x = \frac{-b}{2a}$
21. A function that has  $x^2$  as its highest power
23. The longest leg of a triangle. It's always across from the right angle.
26. A function in the form  $y = ab^x$  where  $a \neq 0$ ,  $b \neq 1$ , and  $b > 0$  is an \_\_\_\_\_ function.
28.  $b^2 - 4ac$  (the expression under the square root in the quadratic formula). It tells you the number and type of solutions for a quadratic function.
29. If you're doing a trig word problem and you start drawing your triangle by making an angle that goes down from horizontal, the problem involves an angle of \_\_\_\_\_. (The angle between a horizontal line and the line of sight from the observer to an object at a lower level).
33. The horizontal line that is used as the reference line about which the sine wave oscillates.
34. A polynomial that has 3 terms.
36. SOH-CAH-TOA and the Pythagorean Theorem only work if you have a \_\_\_\_\_ triangle.
37. The name for  $b$  in  $y = \log_b x$  or  $b^x$
45. The maximum or minimum value of a parabola. Also,  $a(x - h)^2 + k$  is called \_\_\_\_\_ form.